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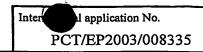




INTERNATIONAL PRELIMINARY EXAMINATION REPORT

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Anslation Internation	PC	\mathbf{CT}	(Itelian materia intere intere interes intere
and internation	ONAL PRELIMINA	ARY EXAMIN	ATION REPORT
	(PCT Article 3	6 and Rule 70)	
Applicant's or agent's file reference PCT 603 FOR FURTHER		ACTION See Notification of Transmittal of Internation Preliminary Examination Report (Form PCT/IPEA/41	
International application No. PCT/EP2003/008335	International filing date 29 July 2003 (2	•	Priority date (day/month/year) 31 July 2002 (31.07.2002)
International Patent Classification (IPC) or n H04L 27/18	ational classification and	IPC	
Applicant INTERESSENGEME SCH	INSCHAFT FÜR RI UTZRECHTSVERV	JNDFUNKSCH ÆRTUNG & CO	UTZRECHTE GMBH O. KG
and is transmitted to the applicant a 2. This REPORT consists of a total of	scording to Article 36. Sheets, i ANNEXES, i.e., slor this report and/or sheets Administrative Instruction	neluding this cover heets of the descript containing rectific ons under the PCT).	national Preliminary Examining Authorit sheet. ion, claims and/or drawings which have to ations made before this Authority (see I
IV Lack of unity of inv V Reasoned statement citations and expla VI Certain documents VII Certain defects in the	of opinion with regard to vention nt under Article 35(2) with mations supporting such s	novelty, inventive so regard to novelty, tatement	step and industrial applicability inventive step or industrial applicability;
Date of submission of the demand		Date of completion	n of this report
27 February 2004 (27.0	02.2004)	03 I	December 2004 (03.12.2004)
Name and mailing address of the IPEA/ER	?	Authorized officer	
Facsimile No.		Telephone No.	





I. Basis	of the re	eport	
1. With	regard to	o the elements of the international application:*	
	the inter	ernational application as originally filed	
\boxtimes	the desc	cription:	
	pages	2-18	, as originally filed
	pages		, filed with the demand
	pages	1,1a,1b , filed with the letter of	17 August 2004 (17.08.2004)
	the clair	ims:	
ا ا	pages		, as originally filed
	pages .	, as amended (together w	vith any statement under Article 19
	pages		, filed with the demand
	pages	1-15 , filed with the letter of	17 August 2004 (17.08.2004)
	the drav	wings:	
	pages	1/17-17/17	, as originally filed
	pages		, filed with the demand
	pages	, filed with the letter of	
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the in Thes	the lang the lang the lang the lang the lang or 55.3 regard minary ex- contain filed to furnish furnish The st	nguage of a translation furnished for the purposes of international search (under Rule nguage of publication of the international application (under Rule 48.3(b)). Inguage of the translation furnished for the purposes of international preliminary e	which is: e 23.1(b)). examination (under Rule 55.2 and/ onal application, the international
		tatement that the information recorded in computer readable form is identical to furnished.	o the written sequence listing has
in th	This report accement accement 70.17).	the description, pages the claims, Nos the drawings, sheets/fig sport has been established as if (some of) the amendments had not been made, since it the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).** sheets which have been furnished to the receiving Office in response to an invitation as "originally filed" and are not annexed to this report since they do not	ion under Article 14 are referred to contain amendments (Rule 70.16
Any	герисет	nent sheet containing such amendments must be referred to under item 1 and annexe	en so sino repuis.

Statement			
Novelty (N)	Claims	1-15	YES
	Claims		NO
Inventive step (IS)	Claims	1-15	YES
	Claims		NO
Industrial applicability (IA)	Claims	1-15	YES
	Claims		NO

- 2. Citations and explanations
 - 1. Document
 - 1.1 Reference is made to the following document:
 - D1: WALDECK B H ET AL: "PERFORMANCE EVALUATION OF TFO-Q2PSK IN GAUSSIAN, MULTIPATH AND FADING CHANNELS", 1999, IEEE AFRICON, 5TH AFRICON CONFERENCE IN AFRICA, CAPE TOWN, SOUTH AFRICA, 28 September 1999 (1999-09-28) to 1 October 1999 (19-10-01), pages 233-238, XP000895832, NEW YORK, USA, ISBN: 0-7803-5547-4.
 - 2. Novelty and inventive step
 - 2.1 Document D1 is considered to be the prior art closest to the subject matter of claim 1. Said document discloses (the references between parentheses relate to D1) a method relating to Q2PSK signals and, in particular, to specific orthogonal pulse shapes of three different types (page 233, right-hand column, line 1 to page 235, right-hand column, line 14). For the first type, a lowpass filter with Nyquist edges is used, said filter being

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operated at half the possible bit rate. The pulse, which is also orthogonal, is produced by a time shift. The spectra of the two pulses are in the same frequency range. In the second type, too, the spectra are in the same frequency range. third type, a duo-binary signal is generated, the pulse responses therein being time-delimited and in the same frequency range. Thus, the subject matter of claim 1 differs from the known method in that the transmission filters are not in the same frequency In particular, there is a subsequent residual-sideband filtering step in which a purely imaginary transfer function is determined from the difference of a first lowpass filter and a second, lowpass filter with a bandwidth that is half that of the first lowpass filter.

The subject matter of **claim 1** is therefore novel (PCT Article 33(2)).

2.2 The problem addressed by the present invention can thus be regarded as that of selecting the transmission filter in such a way as to create a multicarrier system with reduced crosstalk.

The solution to this problem, as proposed in claim 1 of the present application, involves an inventive step (PCT Article 33(3)) because the use of multicarrier residual-sideband modulation allows real and imaginary channels to be used in an alternating sequence. In this way, arbitrarily reducible in-channel quadrature crosstalk and crosstalk in only one adjacent channel is obtained.

2.3 Claims 2-15 are dependent on claim 1 and, thus, likewise satisfy the requirements of the PCT in respect of novelty and inventive step.